SPLASH 2004: NOAA Ship McArthur
Weekly Science Report

9 September 2004
R. Pitman - Cruise Leader

SCIENCE SUMMARY: 2-8 September 2004

We had an off-and-on week here in the Bering Sea with a fickle wind blowing anywhere from 0-35 kts. Our days are shortening appreciably, the summer weather window is starting to close down on us and autumn is elbowing in. Fortunately, we were blessed with the good weather in areas where the whales were numerous. There are more whales up here now than there were in July – presumably humpbacks and fins move through Unimak Pass and continue to disperse further north throughout the summer. Two days out of port, one of our shipmates, Greg Hubner, found out his father was gravely ill and we returned to Dutch Harbor so he could fly home. We wish you the best Greg. After that, we started heading up toward the Pribilofs again, along the continental slope. Hard to believe that fin whales and humpbacks are considered endangered species – for much of this leg we have been in sight of one or both of them during most daylight hours. Blue whales and right whales are another story – whalers in the last century were rather single-minded in their attempts to rid the North Pacific these two species and it is still not clear if they succeeded. We spent Saturday night among the Pribilofs, bobbing between the islands of St. Paul and St. George (actually all of the Beatles were saints - except Ringo). Then a low pressure cell wrapped its arms around us and we spent all of the Sunday hunkered down in the shallows just north of St. Paul while the Bering hissed at us. Monday AM we lit out for central Bristol Bay in Beaufort 6-7 conditions, to look for more humpbacks and a pair of right whales that we satellite-tagged last month (from a different vessel). At the time of the tagging we got a skin sample from the larger animal and we wanted to try one more time to collect a sample from the smaller one. Genetic testing will tell us if they are, as we suspect, a cow with her calf. There are still only a handful of right whales in the entire eastern North Pacific and any evidence that they are reproducing would be extremely welcome news. Then … HOLY COW! We got a message from Paul Wade at National Marine Mammal Lab that the right whale we had tagged was fairly close to where we were working so we went to take a look. As we were in transit to that area on Wednesday we found a cow and calf right whale, and then another pair of what looked like two adults less than a mile away. We traveled 15 miles or so that night and the next day we found maybe 12 more right whales. The chief scientist for this project (Jay Barlow take a bow) gave us permission to linger in the area for another day and we found at least 14 right whales, although some were duplicates of the previous two days. We are still sorting through the photos and we won't have a thorough understanding of how many whales were present here this last week but we did obtain 20 biopsy samples (some likely duplicates in there), and we now have a photo catalogue of NE Pacific right whales that numbers at least 24 individuals. We will have to analyze all of the biopsy samples and combine them with the photo records to get some idea of just how many whales may have been present but it will certainly increase the number of known right whales in the eastern North Pacific, and perhaps double the

previous number. To put the number of animals we saw these last three days into some perspective, we had a dedicated right whale cruise in this area in 2002 and we saw approximately 5 right whales during a 2 month cruise in the same waters. Perhaps most importantly is the fact that we have seen at least 3 and probably 4 calves in Bristol Bay this year. During the 2002 cruise we found the first right whale calf recorded in the eastern North Pacific in over 100 years, and its mother was the only female known from that population. Seeing this many calves here this year greatly increases the prospects that this population, with some protection, could actually recover at some time in the future. Stand up for your rights!

Sightings and Effort Summary for Marine Mammals

Date	Start/Stop Time	Position	Total Distance	Avg. Beaufort
090204	1112	N54:55.39 W167:07.00	33.9 nmi	3.3
	1837	N54:29.57 W168:17.89		
090304	0801	N54:18.98 W166:46.39	36.0 nmi	2.8
	1444	N54:54.54 W167:24.20		
090404	0741	N55:39.09 W169:08.51	66.2 nmi	4.7
	2052	N56:26.55 W170:23.30		
090504	Called on account of weather			
090604	Called on account of weather			
090704	0905	N57:03.82 W165:40.71	48.5 nmi	3.6
	1805	N56:06.71 W165:44.96		
090804	Worked right whales entire day			

CODE	SPECIES	TOT#
037	Orcinus orca	5
046	Physeter macrocephalus	3
066	Eubalaena glacialis	1
070	Balaenoptera sp.	2
071	Balaenoptera acutorostrata	2
074	Balaenoptera physalus	35
076	Megaptera novaeangliae	21
079	unid. large whale	13
	TOTAL	82

Note: Dall's & harbor porpoises and pinnipeds are not included.

Biopsies (Juan Carlos Salinas)

Species	Weekly	Cumulative
Humpback whale	32	340
Fin whale	14	44
Northern Right Whale	11	11
Blue whale	0	4
Sperm whale	0	6
Killer whale	4	32
Baird's beaked whale	0	3
Dall's porpoise	0	1
Cuvier's beaked whale*	0	1
Grand Total	61	442

*dead when sampled

Photo-Project (Holly Fearnbach)

Species	Weekly #	Cumulative #
Humpback whale		
Catalog-quality flukes	45	569
Fin whale dorsal IDs	21	73
N Right Whale head IDs	22	22
Sperm whale fluke IDs	0	13
Blue whale dorsal IDs	0	5
Minke whale dorsal IDs	0	1
Killer whale dorsal IDs	19	167
Baird's beaked whales	0	15
Northern right whale dolphins*	0	1
Pacific white-sided dolphins*	0	3
Cuvier's beaked whale (dead)	0	1
Steller sea lion	0	1

*number of groups photographed

Oceanographic Operations (Steven Barry)

Date	Number CTDs
9/02	1
9/03	0
9/04	1
9/05	0

9/06	1
9/07	1
9/08	1

Acoustics Squeakly Report (Shannon Rankin and Lisa Munger)

The week started off squeakily indeed, with some killer whales (Orcinus orca) vocalizing on a sonobuoy that we deployed on the evening of the 3rd. The next day, we deployed a sonobuoy on a minke whale sighting, but only heard fin whales (those commoners). We steamed along the shelf break for the next couple of days with the towed array out, and heard the usual sperm whales out in deeper waters.

Our real triumph came as we arrived September 7th in the right whale “box,” on the southeast Bering shelf. We threw in some afternoon sonobuoys and heard right whales vocalizing, and judging by the relative intensity of the calls, we guessed that the whales were 25 miles to the south. And that is almost exactly where we found them some hours later, give or take a mile. Hurrah!

For the past few days since then, we have been throwing in sonobuoys regularly and recording the multitudes of right whales all around us. (For this population, 25 whales counts as a "multitude"). North Pacific right whales usually call at frequencies between about 80 and 500 Hz, with the most common call being an upsweep from about 90-150 Hz and lasting a second. Since we can't include sound files on the website just yet, imagine a cow asking you a question--moooooh??--that's kinda how they sound.

Poet’s Corner:

Righteous Whales by Lisa Munger

One evening, in the Bering Sea
A right whale sang a song to me
We heard its voice for twenty miles
And when we saw it, it brought smiles.

The next few days we were astounded
For right whales in these parts abounded
We saw three babies! Maybe four!
And now we have hope there will be more.

The small boat went to take a look
We’ll put their pictures in the book.
We’ll analyze their DNA
And calls on the hydrophone array.

Tonight we have to say goodbye

(We don’t think the whales will cry)
We’re glad your future’s looking brighter
‘Cuz you whales don’t get much righter!

Overtime Report for SWFSC and Aquatic Farms Employees:
Normal, planned OT for all